

**Interpretation Number:** 3-07/02 (Clause 37 Auto-Negotiation)  
**Topic:** Clause 37 Auto-Negotiation  
**Relevant Clauses:** Clause 37  
**Classification:** Not a request for interpretation

### **Interpretation Request**

I found the Auto-Negotiation standard in IEEE 802.3z Gigabit Ethernet standard prevents easy linkage of Gigabit Ethernet, and manufacturers are following the standard. The issue is:

Equipment A enables its 802.3z Auto-Negotiation, it's always sending out Auto-Negotiation messages into the 1000Base-SX optic fiber, its "link" status will not establish unless it receive proper Auto-Negotiation reply.

-- This is according to 802.3z standard.

Equipment B, the peer of A, disables its 802.3z Auto-Negotiation, its "link" status is easier to establish than A, it only need bit-sync and byte-sync from SerDes chip to light up "link" LED. So, B received A's auto-negotiation messages, get enough valid bit-sync and byte-sync to establish "link" status, but B will never reply A's auto-negotiation messages so A will not establish "link" status.

Here comes the issue: A doesn't show "link" while B shows "link", this is only because A enables auto-negotiation and B disables it. This will confuse equipment customers and bring many difficulties for Gigabit Ethernet's application. Suppose "Auto-Negotiation" should make the application more easier, no matter if the peer enables its auto-negotiation.

My suggestion is: Let A establish "link" status just when it receive valid commas from B, no matter B does or doesn't establish its auto-negotiation function. Do not make the auto-negotiation guy difficult to talk with others. (1000Mbps and full-duplex are always used in Gigabit Ethernet areas.) Of course, it'll be more confident if it can receive auto-negotiation reply from its peer.

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### **Interpretation for IEEE std 802.3-2002**

This request is being returned to you because it does not constitute a request for interpretation but rather a request for a change. Generally, an interpretation request is submitted when the wording of a specific Clause or portion of the standard is ambiguous or incomplete. The request should state the two or more possible interpretations or the lack of completeness of the text.

While you referred to Clause 37, you have not indicated any ambiguity nor lack of completeness of the text but rather you appear to have understood the specification and made a suggestion for a change.